



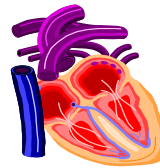
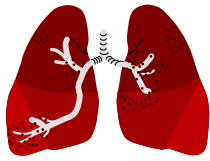
English for Laboratory Biomedicine Students

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Unit 1: Know thy Body



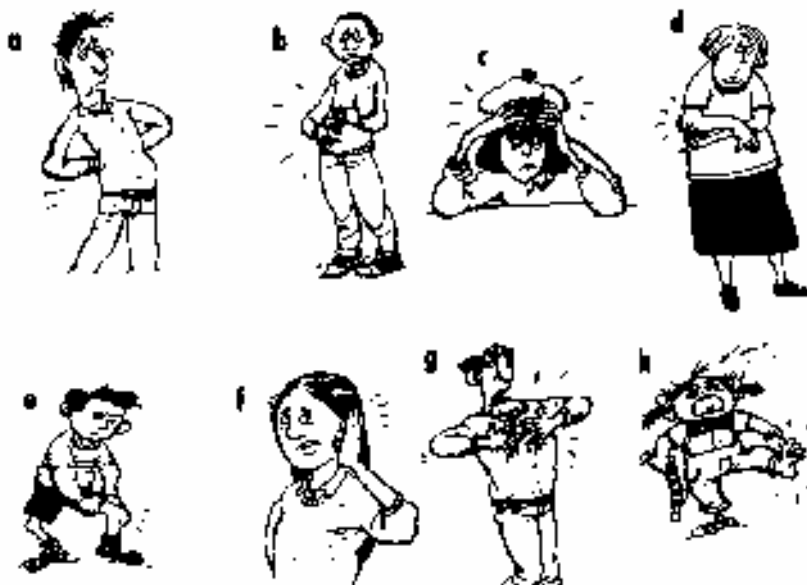
Human Body & Organs

Group work: Think of all the words related to body that you know. Make as long list as possible. Compare with other groups:

Parts of body:

Organs:

Task 1: What is wrong with the people in the pictures? Where do they have an "ache" or a "pain"?



Task 2: Which of the words in the box combine with -ache?

arm	leg	chest	back	elbow	tummy	bottom	thigh
stomach	ankle	wrist	head				

Task 3: Complete these sentences, using one of the following words: *rash, bang, chip, swell*

1. While I was opening the door I _____ my head.
2. Because of something I had eaten it came out in a _____ .
3. I fell on ice and _____ my front tooth.
4. Some hooligans got me in the street and I ended up with black eye and _____ lips.

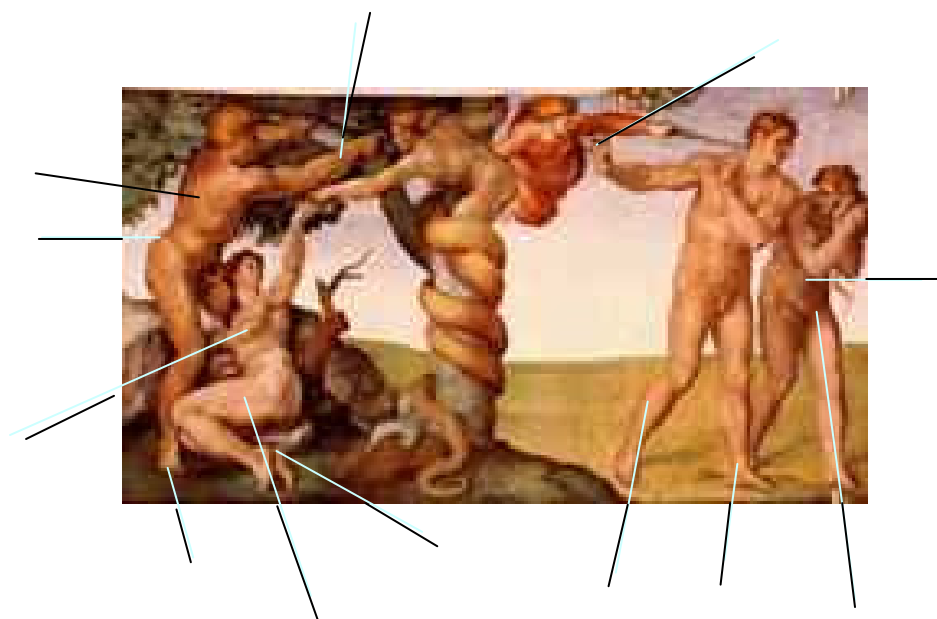


Study the words in the box. Where can you find these parts of body? Put them in the appropriate places in the table below:

jaw	loin	calf	heel	forearm
palm	crown		buttock	
hip	thigh		nipple	groin
breast	navel		toe	ankle

head	
arm/hand	
upper torso	
lower torso	
leg	
foot	

Name the parts of body in this illustration:



Idioms - body

Task 4: Select from the words in the box and complete idiomatic phrases

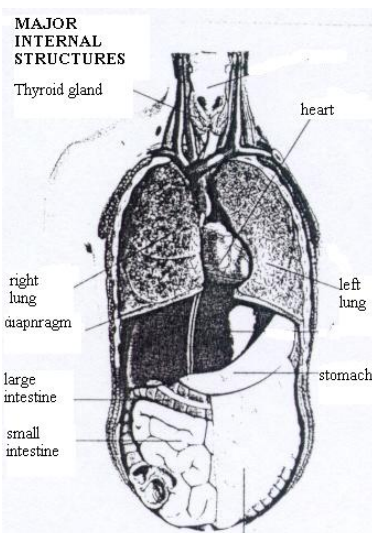
skin neck heart face chest tooth bones

1. Ironing is my least favourite activity. It's a real pain in the _____.
2. The pass mark was 60% and he got 60.3%, so he made it by the _____ of his teeth.
3. I know I should got to the meeting by I just can't _____ it.
4. She has always kept her feelings for herself. She is not a sort of person to wear her _____ on her sleeve.
5. I just cannot resist chocolate and cakes - I have a sweet _____.
6. The first thing to start solving a problem is to get it off your _____.
7. I think there is going to be trouble at the meeting tonight; I can feel it in my _____.

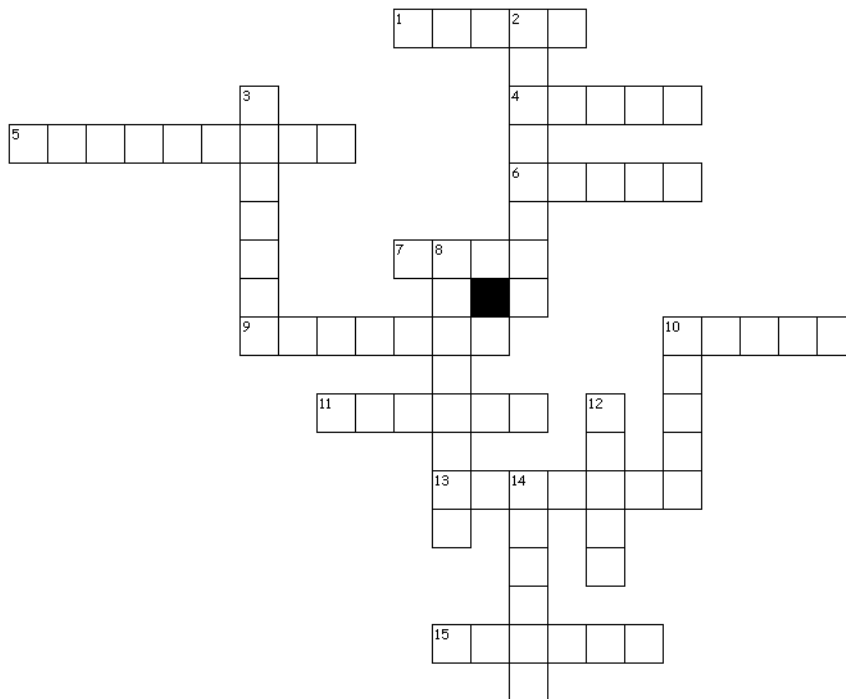
Task 5: Read the text and refer to the picture on the right and complete the text:

Vital body organs

All the vital body organs except for the brain are enclosed within the trunk or _____ (the body apart from the head and limbs). The trunk contains two large cavities separated by a muscular sheet, called _____. The upper cavity, known as the _____ or chest cavity, contains the _____ and _____. The lower cavity, called the abdominal cavity, contains the _____, _____, _____ and pancreas which all play a role in digesting food. Also within the trunk are the _____ and _____ which are part of the urinary system.



Know thy body – crossword puzzle



Across

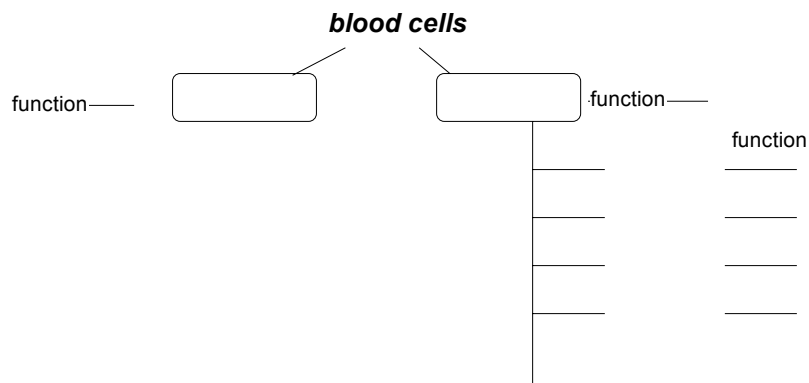
1. legs or arms
4. upper front part from neck to stomach
5. long tube through which food travels from the stomach and out of the body while it is being digested
6. the long tube that carries solid waste from the stomach out of the body
7. a tube carrying blood from all parts of the body to heart
9. an organ in the body where food is digested
10. large organ cleaning the blood
11. an organ near the stomach which produces and cleans the body's blood
13. pair of organs in a woman's body which produce eggs
15. soft fatty tissue in the centre of a bone

Down

2. synonym for spine
3. a pair of organs removing waste from blood and producing urine
8. movement or act of emptying waste
10. two breathing organs in a chest
12. a synonym for backbone
14. a tube carrying blood from heart to other parts of body

Unit 2: Blood

Task 1: Read the passage below and then complete the table:



Blood is composed of many different kinds of cells, each with a specific function. Most blood cells are formed in the bone marrow and released into the bloodstream at various stages of maturity.

Red blood cells (erythrocytes) make up 45 percent of blood volume. Their primary function is to pick up oxygen in the lungs and transport it to tissues throughout the body. At the tissue site, red blood cells exchange oxygen for carbon dioxide and carry it back to the lungs to be exhaled. First, they are packed full of hemoglobin, which functions as the oxygen carrier. Interestingly, red blood cells have no nuclei, a feature which makes even more room for hemoglobin. Second, they are shaped like disks. This shape greatly increases their surface area compared with a sphere of the same volume. The large surface area is important because it improves the efficiency of oxygen transfer between hemoglobin and the tissues where the oxygen is needed. Red blood cells are formed in the bone marrow, and they have an average life span of about 120 days. After this period of time, red blood cells tend to become misshapen and they are removed from the circulation by the spleen.

White blood cells (leukocytes) are only 1/1,000 as numerous as red blood cells in the bloodstream. There are five main types: neutrophils (also called granulocytes), eosinophils, basophils, monocytes, and lymphocytes. Each plays a distinct and important role in helping the immune system fight infection.

Neutrophils contain granules of bacteria-killing enzymes in the cytoplasm - the substance surrounding the cell. Eosinophils attack protozoa that cause infection. Basophils are the least common type of white blood cell and their function is not completely understood. They play an important role in regulating allergic reactions such as asthma, hives, hay fever and reactions to drugs.

Monocytes are the largest white blood cells. They engulf and destroy invading bacteria and fungi and clean up debris once foreign organisms have been destroyed by other white blood cells. When monocytes leave the bloodstream and enter tissues or organs, they can evolve into larger cells called macrophages that have an increased capacity to destroy foreign organisms invading the body.

Lymphocytes are the smallest white blood cells and are the backbone of the immune system. Lymphocytes fight viral infections and assist in the destruction of other parasites.

A white blood cell count (WBC) is performed by counting the number of white blood cells in a sample of your blood. A normal WBC is in the range of 4,000 to 11,000 cells per microliter. A low WBC is also called leukopenia, a finding common in persons with HIV disease.

Task 2: Translate into English:

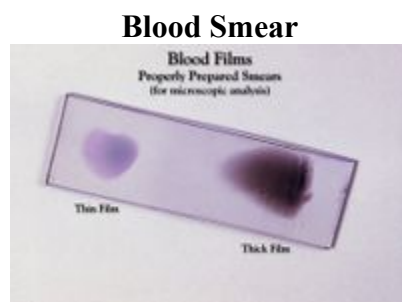
1. Povprečna življenska doba je 12 dni.
2. Pomanjkanje železa povzroča neustrezno tvorbo rdečih krvnih celic.
3. Te celice tvorijo 45% volumna krvi.
4. Celice prenašajo kisik do tkiva.
5. Neutrofili imajo sposobnost uničevanja tujkov.

Task 3: Pronunciation - Blood and Lymphatic systems

anaemia	eosinophil	hypochromic	platelet
antibody	erythrocyte sedimentation rate (ESR)	hypogammaglobulinaemia	polycythaemia
anticoagulant	erythrocytic	immunosuppression	prothrombin
antigen	gamma globulin	lymphadenopathy	purpura
basophil	haemoglobin	macrocyte	reticuloendothelial
blood	haemolysis	macrocytic	serum
coagulation	haemolytic	microcytic	thalassaemia
emboli	haemopoiesis	neutrophil	thrombocytopenia
embolic	haemopoietic	pernicious anaemia	
embolus	haemostasis	phagocyte	
embolism	haemostatic	phagocytic	

Task 4: Complete the text. Use the verbs given in the menu and put them in the appropriate form

examine	allow	investigate	space	place	immerse	disperse
---------	-------	-------------	-------	-------	---------	----------



A **blood film** or **peripheral blood smear** is a slide made from a drop of blood, that (1) _____ the cells to be (2) _____ microscopically. Blood films are usually done to (3) _____ hematological problems (disorders of the blood itself) and, occasionally, to look for parasites within the blood.

Blood films are made by (4) _____ a drop of blood on one end of a slide, and using a *spreader slide* to (5) _____ the blood over the slide's length. The aim is to get a region where the cells are (6) _____ far enough apart to be counted and differentiated.

The slide is left to air dry, after which the blood is fixed to the slide by (7) _____ it briefly in methanol. The fixative is essential for good staining and presentation of cellular detail. After fixation, the slide is stained to distinguish the cells from each other.

Unit 3: How safe are we?

Pre-reading:

Task 1: Before you start reading the text below think about your personal safety and think about the following statements. Do you agree or disagree with them?

- | | | | |
|----|---|-------|----------|
| 1. | The death-rate of cancer is higher among the working population than those who stay at home . | Agree | Disagree |
| 2. | The quality of air is better at home than at the workplace | Agree | Disagree |
| 3. | Living longer means we are living healthier. | Agree | Disagree |

Task 2: Now read the text and see whether your answers have been correct or wrong:

Tens of thousands of Britons could suffer anything from chronic ill-health to early death because of toxic chemicals used in consumer products in homes, according to a new book.

1. Fewer than a quarter of the 70,000 chemicals used in toiletries and cleaning products have been subjected to a full safety investigation, while others, officially classed as hazardous waste, are frequently found in products from baby lotion to eye drops and cleaning fluids, according to Pat Thomas, author of *Cleaning Yourself to Death* .

2. Women who work at home have a 55 per cent higher death rate from cancer than those who work outside the home, a statistic that Thomas argues is closely related to the increase in household cleaning products and toiletries.

3. 'We spend 90 per cent of our time at home but some of the most toxic chemicals we come into contact are bought in good faith in stores and supermarkets and brought back into our homes by us, in the form of every day cleaning products.'

4. Thomas believes that the lack of legislation has meant that chemicals banned in other, more tightly controlled areas are still commonly used in thousands of household products.

5. She believes this contributes heavily to the US Environmental Protection Agency's recent finding that the air quality in homes is more toxic than the outdoor air, often containing between two and five times the concentration of toxic chemicals.

6. 'Most people cross their fingers and pray that the companies who put these chemical soups together really do have the consumer's welfare and best interests at heart, but the emerging evidence is that many of these chemicals have the potential to make us and our children very ill indeed,' she said.

7. Although no national research has been carried out in Britain, a survey by the National Institute of Occupational Safety and Health in America found that of 2,983 chemicals found in personal care products, more than 30 per cent were toxic.

8. According to Thomas, toiletries and cleaning products regularly include ingredients which contain carcinogens, hormone-disrupting chemicals and central nervous system disrupters.

9. 'This has remained hidden because people assume that if we're living longer, we must be healthier,' said Thomas. 'But we are actually strikingly unhealthy: chronic diseases are on the rise, respiratory problems such as asthma and bronchitis have doubled in recent years, and vague disorders such as sinusitis and allergic rhinitis are becoming major problems. Heart disease, diabetes and thyroid problems are also on the rise and infertility of both males and females is becoming more common, as are other hormonally linked disorders.'

10. Thomas found high levels of sodium lauryl sulphate, a harsh detergent commonly used as an engine degreaser, in toothpastes, shampoos and cleansers. One of the most dangerous chemicals Thomas found was nitrosamine, a carcinogenic commonly used in baby and body lotions, facial moisturisers and shampoos.

Source: ***How a clean home can be a killer***, by Amelia Hill, Sunday February 25, 2001
The Observer

Task 3: Post-reading: Discuss in pairs :

1. What have you find most striking about the facts presented in this article?
2. How aware are you of the potential dangers coming from the products we use every day?
3. Who do you think is responsible for this?

Task 43: Word study

Find words with the same meaning in the text:

Par 6: prosperity, well being		Par 8: component	
Par 6: proof		Par 9: extremely, highly	
Par 9: accept as true		Par 9: unclear, indistinct	
Par 4: prohibit		Par 8: causing disorder	

Task 4: Cause and Effect

Refer to the information in the grid below and make sentences which state the causes and effects of hazards. Use phrases from the box. Look at the example first:

Example: Multiple chemical sensitivity is caused by chemicals and can cause allergies.

It results from ...
It is found in...
It is caused by ...
It is due to...
It can cause (lead to)
is (are) the result of...
It hinders (prevents, increases, causes)...

Cause of hazard/symptom	Where does the hazard come from?	impacts on people's health
multiple chemical sensitivity	chemicals	allergy
lack of legislation	state policy	uncontrolled production
oestrogen	detergents	fertility in men
modern diseases	chemicals	higher death rate
carcionsgens	toiletries, cleaning products	nervous system disruption
fumes	traffic	asthma

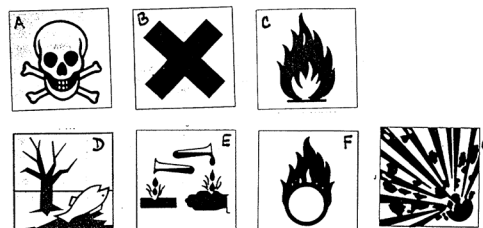
- 1.
- 2.
- 3.
- 4.
- 5.

Task 5: Read the descriptions of some common hazardous laboratory substances:

<p><u>Xylene</u> is a moderately flammable liquid which is a mild eye and mucous membrane irritant. It is a primary skin irritant and a central nervous system depressant. It will de-fat skin and may cause dermatitis. Over-exposure leads to respiratory failure.</p>	<p><u>Toluene</u> is a flammable liquid. It can be absorbed into the body by inhalation, ingestion or through the skin. It is mutagen and should never be handled during pregnancy. The most rapid route of entry is through the pulmonary system, and necrosis can develop before signs of irritation are apparent. 2000 ppm can cause death.</p>
<p><u>Ammonium nitrate</u> is an allergen and possible carcinogen that supports combustion. It is an eye, skin and respiratory tract irritant. If ingested it causes dizziness, abdominal cramps, vomiting, bloody diarrhoea, weakness and collapses.</p>	<p><u>N,N-dimethylaniline</u> is toxic and causes headaches, shortness of breath, weakness, nausea and confusion. High levels lead to convulsions, coma and possibly death. Chronic effects include central nervous system disorders, liver, kidney and bone marrow damage, weight loss, anaemia and weakens.</p>
<p><u>Hydrochloric acid</u> is a strong irritant and corrosive and must be handled with great care. It will cause severe burns to exposed skin. Always use a fume hood when handling this acid. Always add acid to water and never water to acid as the heat generated may cause a violent reaction.</p>	<p><u>Potassium chloride</u> is a strong oxidising agent and can be explosive. It is a strong eye, skin and respiratory tract irritant and is toxic by inhalation and ingestion.</p>

Task 6: Look at the safety symbols: How would you label the containers with substances from the descriptions above?

1. dangerous for the environment
2. flammable
3. explosive
4. oxidising
5. irritant
6. toxic
7. harmful



Task 7: Dictionary work: Word formation

Use a good dictionary and find the word forms stemming from the same root and complete the grid where appropriate:

verb	noun	adjective
	irritant	
	inhalation	
		combustible
	ignition	
breathe		
	effect	
		flammable
digest		
		oxidising
	danger	

Task 8: Fill in the blanks with a suitable form of the words given in the table above:

1. The fuel spontaneously _____ because of the high temperature and pressure.
2. There can be no doubt whatsoever that smoking _____ your health.
3. I've never played ice hockey - it's far too _____.
4. _____ system is the organs of a body which _____ food.
5. The _____ in an engine is the electrical system that causes the fuel to burn or explode in order to start the engine.
6. Too much smoke may _____ your eyes.
7. If you have _____ toxic fumes, go out for a _____ of fresh air.
8. He sat by the fire, staring at _____.
9. If a substance _____, it means it combines with oxygen.

Task 9: Fill-in the gaps. Use the words below:

explosion **stored** **separate** **flammable** **rubber** **spill**
coat **liquid** **agents** **washed** **discharged** **gaseous**

Oxidising agents

Powerful oxidising agents are liable to promote fire and /or ____1____ and should not be stored with ____2____ liquids or poisonous substances. Keep oxidising and reducing agents ____3____. For example, acids should never be ____4____ close to ammonia. If a ____5____ does occur, protective clothing, including ____6____ gloves, a face shield and a laboratory ____7____, should be worn. A respirator is also required for such ____8____ as chlorine or bromine.

If the oxidising agent is a ____9____ or solid, cover it with the reducing agent which would promote rapid reduction. The resultant mix can be ____10____ safely into the sewage system with a large excess of water. The site of the spill should be ____11____ with a soap solution containing some reducing agent.

If the oxidising agent is ____12____ it can be bubbled through the reducing agent and the gas can be vented into the fume hood.



Unit 4: Understanding technical language: Modifiers

Technical language is difficult to understand because of noun-noun combinations. Study the following word combination and try to translate it into Slovene.

virtual image magnification
culture-treated polyester membrane

- Which word is the main one in each example?
- Which element(s) define (modify) this word?

The above example is a noun-noun combination. All the words standing in front of the last word in the row are called modifiers. Modifiers provide additional information about the main word which is the last word in the cluster. They can denote either:

1. a substance of which something is made (e.g. paraffin wax = parafinski vosek)
2. purpose for which something is used (e.g. growth area = gojitvena površina
(cell culture clusters = gojitvene ploščice))
3. an object of which something is a part (e.g. head filter = filter pri glavi)
4. object of the action (e.g. mucous formation = tvorba sluzi)

See how the meaning of the following two noun phrases can be changed!

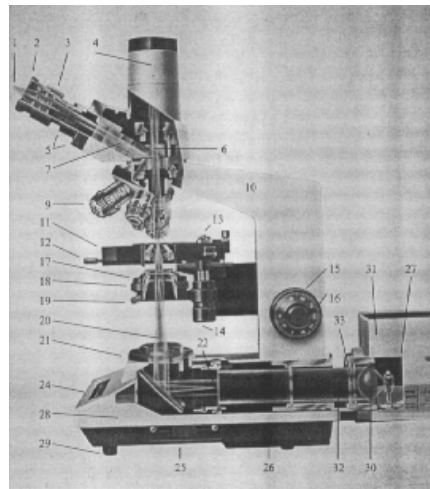
gas turbine = turbine which is driven by gas
turbine gas = gas which drives the turbine

For paraphrasing the noun combinations you must use various prepositions or of-phrase, e.g.

	noun-noun combination	paraphrase
of-phrase	tube length transport system	length <u>of</u> the tube system <u>of</u> transport
prepositions	safety data focus knob fire safety safety engineering combustion control systems design heat protector cell scrapers growth area	data <u>on</u> safety knob <u>for</u> focusing sth. safety <u>from</u> fire engineering <u>in</u> safety design <u>of</u> a system <u>which</u> controls combustion protector <u>against</u> heat scrapers <u>for</u> cells area <u>on</u> which sth. grows

Task 1: Look at the picture of the microscope and explain the following noun-noun combinations. Use of-phrases or prepositions.

- specimen holder
- aperture adjustment
- rubber feet
- lamp housing
- filter holder
- heat filter
- field flattening lens elements
- virtual image magnification
- peripheral image focus error



Task 2: Paraphrase the following noun-noun combinations:

1. syringe needle _____
2. vaporization chamber _____
3. fire suppression system _____
4. flow rate _____
5. automated powder dispensing station _____

Task 3: Understanding technical descriptions:
Read the text below (focus on paragraph one only) and underline all examples of noun-noun combinations (cluster words)

Automated Powder Dispensing Station



(1) This dedicated station automates your time-consuming, routine powder dispensing tasks. Station accepts a variety of off-the-shelf laboratory sample containers. To operate, simply load the station with a rack of containers and the powder to be dispensed, input the target weight and dispensing tolerance, and start the unit. Note: Variations in powder texture and grain size can affect operation.

(2) The station places a container on the balance, determines the tare weight, calculates the target gross weight, dispenses the powder to the target gross weight, and returns the container to the rack. This sequence continues until all containers have been processed, freeing you for other tasks.

(3) All communications to and from the computer, transport system, dispensing module, and balance are sent via a built-in RS-232 interface. Statistical information such as the tare weight, gross weight and calculated net weight on each dispensing are stored in a data file for further processing or printing.

Station comes complete with a 100-mL powder reservoir, a powder dispensing module, a Satorius balance and IBM-compatible laptop computer, your choice of rack, a transport system, three fingers to hold a variety of containers and a 6-ft cord with three-prong plug.

Task 4: Write down all noun-noun combinations from paragraph 1 and try to paraphrase them:

1. _____

paraphrase:

2. _____

paraphrase:

3. _____

paraphrase:

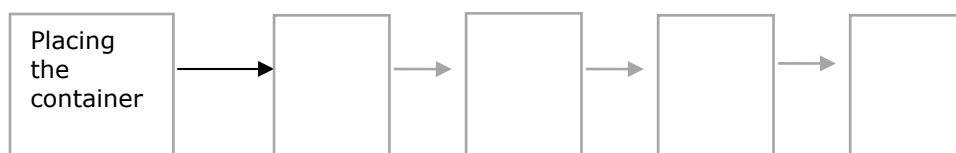
5. _____

paraphrase:

6. _____

paraphrase:

Task 5: Read paragraph 2. Find the instructions for operating the instrument . Draw a flow-chart and label it:



Task 6: There are five steps in the operation of this instrument. Describe the operational process. Which tense (form) will you use? Write in the space below:

Task 7: What else does the station include? Read paragraph 3 and list the items below:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Task 8:

Role play: work with your partner . **Imagine you are representing a company which produces powder dispensing instruments. Try to persuade the customer to buy it. Put forward all the advantages of this instrument.**

Task 8:

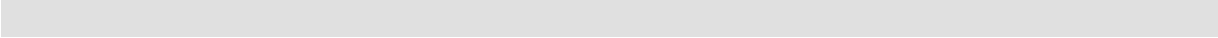
Dictionary work: Refer to Par 1 where the following words appear. From these words derive as many other word-forms as possible and use them in sentences below:

Example:

automates (automated, automation, automatic)

- consuming _____
- dispensing _____
- operate _____
- tolerance _____
- variations _____
- determine _____

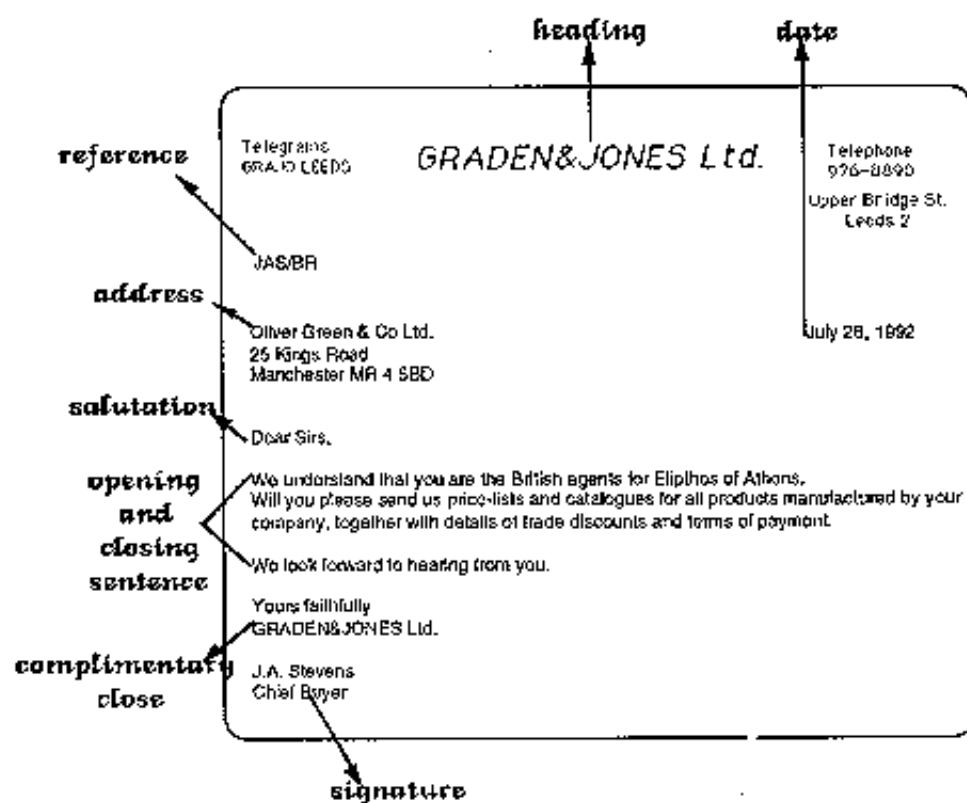
Task 9: Complete the text: inset the correct form using the words above:

1. There is a vending machine on the platform that _____ snack.
 2. Global temperatures _____ significantly over the last 140 years.
 3. _____ protection takes care of buyers of goods and services against low quality or dangerous products.
 4. Repairs have already begun and we expect the factory to be fully _____ again within six months.
 5. It seems these animals can _____ temperatures which would kill other species.
 6. Work on the production line is monotonous and lacks _____.
 7. Your health is _____ in part by what you eat.
 8. We have representatives _____ in most countries.
- 

Unit 5: Buying equipment: Letter Writing



Study the format of an official letter.



Basic components of official correspondence

Dates

You can use one of the following ways in writing the date:

July 13, 2007 (Am.)

July 13th, 2007 (Brit.)

13 July 2007 (general)

Note! Avoid confusion:

13.7.2007= understood as July 3rd in British English, but March 7th in American English.

Salutations

"Dear Sir or Madame," (Dear Sir/Madam,) if you don't know whether the recipient is a man or a woman

"Dear Sir," or "Dear Madam," when you know the name of the person who is receiving this letter

Dear Chairperson, Dear Committee, in more specific occasions

Complimentary close

Yours faithfully,

Yours sincerely,

Sincerely yours, (Am)

Faithfully yours, (Am)

Respectfully yours,

Cordially,

Respectfully,

Letter of Inquiry

When we write letters of inquiry we usually ask for some information, advice, directions, etc. You need to state the main purpose, or subject at the beginning.

Structure of the letter of inquiry

- **Open** (say where you got the information from)
- **State the reason for writing** (e.g. why a certain product is interesting for you)
- **Request** (what you would like them to do)
- **Close** (polite phrase)

Buying a product

You may be interested in how to order a product, how to pay, etc. There are at least three basic questions one might ask when writing an inquiry letter:

price

shipment

samples

discounts for large orders

pro-forma invoice

price (quotation), a price-list

method of payment (cheque, credit card, bank transfer)

terms of payment (advance payment, credit)

delivery time

insurance

servicing

warranty, maintenance

Useful language:

Opening:

With regard to your advertisement...
We saw your product demonstrated at the Biomed Fair, held in...
Ms. King has advised us to get in touch with you concerning....
We saw your advertisement in this month's issue of
... and would like to know...
... and would be grateful if you could ...

Reason:

As a laboratory worker I am interested in ...
We are most interested in developing (improving, extending)...
There is a demand here for ...
There is no representative here for articles of this type.
What we have in mind is ...
What we need is ...

Request:

We wonder if you could help us (advise us, send us, let us have)....
Will you please send us a catalogue (price list)...
We would be glad to receive specifications on.... together with export prices.
We are interested in ordering
We would like to place an order...
We are interested in terms of payment.
We are interested in discounts offered for large orders
Please send us a pro-forma invoice.
We would appreciate a sample for each item.

Close

An early answer will be appreciated.
We are looking forward to receiving your early reply.
We are looking forward to receiving the prices (catalogue).
We look forward to hearing from you.
Thank you in advance for any information you can give us.

Task 1: Complete the letter. Insert the salutation and the complimentary close too.

1.

We have been given your name _____ our associates from Italy.

There is _____ demand here _____ Ljubljana _____ the qualities you

_____, and we believe we could _____ large orders _____ you.

_____ you please send us your illustrated _____, together with your

_____ list.

We _____ forward to _____ you.

_____ yours,

Slavko Pirc

(Research Laboratory Assistant)

2.

With _____ to your advertisement _____ the Science Journal _____ 3rd

November, we _____ ask you for _____ about a new apparatus, shown

_____ page 7.

_____ a clinical laboratory we have a great _____ for such products.

We _____ be glad to _____ an estimate for the costs of installation of this

_____ in our laboratory.

Please, let us _____ your quotation as _____ as _____.

Yours _____,

Martina Rode

(Senior Researcher)

Task 2: Read this letter of inquiry and correct mistakes/improprieties (there should be 12 in total)

9. april, 2000

Instruments Ltd.
USA
Fax: 204-344-6785

Dear sir or madam,

We saw your products advertised in Biotechnology. They seem appropriate for use in our laboratory. We are interested if they are semi- or completely automatic.

We kindly ask you to send us more information. Send us also the price list. We would like to stress that we will need a considerable amount of these products and we may order quite a lot of them if you won't exaggerate with the prices.

I am waiting for your answer.

Looking forward to hearing from you.

Sincerely yours,

Purchase Department

Task 3: Translate:

1. Naši poslovni partnerji so nam povedali, da bi nam lahko posredovali nekaj informacij o ...
2. Oglas za vaš izdelek smo zasledili v časopisu DELO.
3. Veselilo bi nas, če bi nam lahko poslali tehnične podrobnosti za to napravo in izvozno ceno.
4. Zanimajo nas popusti za velika naročila. Prosimo, da nam pošljete vzorce.

Task 4: Write a letter of inquiry

Situation 1:

Write to the Drake Company in Australia. You've seen a new model of an automated microplate transporter at an exhibition in London. Ask for details, terms, delivery time, servicing, warranty.

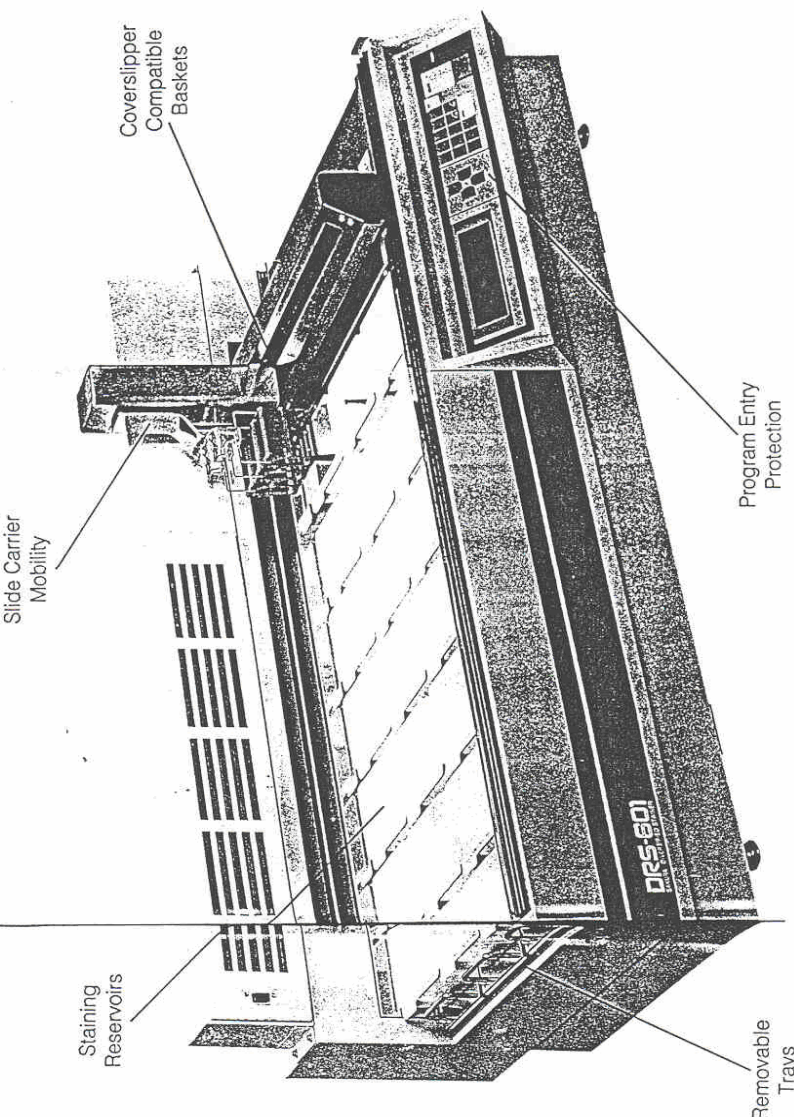
Situation 2:

Write to Mr. Nikemoto, Sakura Company, Japan. They produce special chromatographs. You have heard about them from your partners. Indicate there is a good market for their products in Slovenia. Ask questions about their European representative, address, contact person.

Situation 3:

Write to Prentice Hall Ltd. Ask them to send you a handbook on analytical methods. It was advertised in a catalogue. Ask for a discount since you work for a non-profit organisation. Tell them you would like to pay by credit card.

Saves Time—Unique design facilitates the shortest position of the slide carrier between staining solutions. Economical too—Efficient operation reduces solution contamination increasing stain/solution life.



- ☐ Stain and coverslip using the same basket. Stain up to 60 slides per staining cycle. Stain up to 180 slides per hour.
- ☐ Microprocessor provides for user-friendly operation. Place up to 16 programs into memory. Identify solutions by name and concentration.
- ☐ Compact design maximizes space utilization.
- ☐ The Fume Ventilator is designed to prevent air contamination in the working environment.
- ☐ Plastic staining reservoirs eliminate breakage. Special tab facilitates identification of reagents. Removable trays provide for rapid changing of solutions or exchange of trays to permit different staining procedures.
- ☐ Agitation speed can be programmed by the user.
- ☐ If errors are made during the initial programming of the staining sequence, special warning and error codes alert the user to incorrect program instructions.
- ☐ Unique three-way drive system provides for flexible slide carrier movement, left to right, front to rear and diagonally. Transition time from reagent to reagent is reduced.
- ☐ Reagent usage is monitored. Eliminates the need to change reagents needlessly. Cross-contamination and carry-over are reduced due to special basket design.

Task 1: Look at the advertisement for the Sakura Automated slide stainer on previous page. As you can see, the labels in each paragraph are missing. Chose from the following titles and label each paragraph:

1. Space Saving Design
2. Coverslipper Compatible
3. Programmability
4. Fume hood
5. Staining Reservoirs
6. Agitation Frequency
7. Program Entry Protection
8. Quality Control Program
9. Slide Carrier Mobility

Task 2: Look at these sentences and change the sentences (you need to make a verb from the noun):

*Example: Compact design maximises space utilization.
You can utilize space more efficiently.*

1. Plastic staining reservoirs eliminate breakage.
2. Special tab facilitates identification of reagents.
3. Agitation speed can be programmed by the user.
4. Transition time from reagent to reagent is reduced.
5. Cross-contamination and carry-over are reduced to due to special basket design.

Task 3: Write a letter of inquiry to SAKURA Ltd, Japan.

The situation is the following: you work in a laboratory and would like to buy the slide stainer from the advertisement. You already have an old model but you need answers to additional questions on:

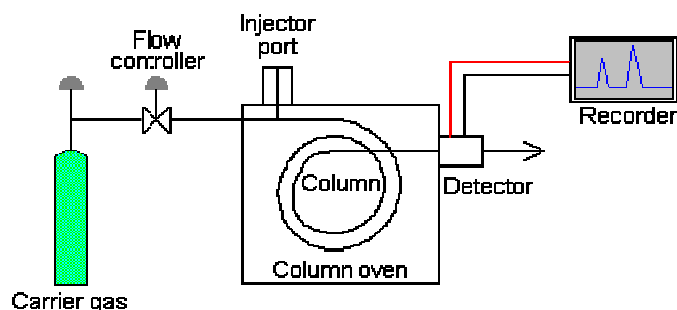
- **compatibility of baskets**
- **size of the apparatus**
- **delivery time, terms of payment, method of payment**
- **warranty**

Unit 6: Laboratory techniques

Read the text on Gas chromatography

In gas chromatography (GC), the sample is vaporized and injected onto the head of a chromatographic column. Elution is brought about by the flow of an inert gaseous mobile phase. In contrast to most other types of chromatography, the mobile phase does not interact with molecules of the analyte; its only function is to transport the analyte through the column. Two types of chromatography are encountered: gas-solid chromatography (GSC) and gas-liquid chromatography (GLC). Gas-liquid chromatography finds widespread use in all fields of science, where its name is usually shortened to gas chromatography (GC).

GSC is based upon a solid stationary phase in which retention of analytes is the consequence of physical adsorption. Gas-solid chromatography has limited application owing to semi-permanent retention of active or polar molecules and severe tailing of elution peaks. Thus, this technique has not found wide application except for the separation of certain low-molecular-weight gaseous species.



Task 1: Word formation:

The following words have been taken from the text and arranged according to three categories: **VERB**, **NOUN** and **ADJECTIVE**. Try to derive other word-forms from these words. In some cases it will be possible to derive more than one word. Use a dictionary.

Verb	Noun	Adjective
	chromatography	
		vaporised
	elution	
		gaseous
		mobile
interact		
	analyte	
transport		
	liquid	
	application	
	adsorption	
	retention	

Note the difference between family words: solid, dissolve, solvent, solute, solution.

Task 2: Word formation

Complete the text by adding a corresponding ending:

Liquid chromatogr_____ (LC) is an analytical chromatograp_____ techn_____ that is useful for separat_____ ions or molecules that are dissol_____ in a sol_____. If the sample sol_____ is in contact with a second sol_____ or liquid phase, the different sol_____ will interact with the other phase to differing degrees due to differences in adsorpt_____, ion-exchange, partit_____, or size. These differences allow the mixture components to be separate_____ from each other by using these differences to determine the transit_____ time of the sol_____ through a column.

Task 3: Prepositions

Insert prepositions: in within of on through for with at (some may be used several times!)

Spectrophotometry is the study and analysis _____ inorganic and organic substances. This includes organisms such as bacteria _____ a solution. Spectrophotometry _____ the visible light range depends _____ how light (electromagnetic radiation) is absorbed and transmitted _____ a solution with an analyte. An understanding of electromagnetic radiation and Lambert-Beer's Law is needed to know how spectroscopy works. In general, when light from the visible range shines _____ a solution, specific wavelengths will be absorbed and unabsorbed wavelengths will pass _____. Transmitted wavelengths are responsible _____ the color and compliment the color absorbed by the species in solution. Absorbed light has energy associated _____ it and causes an electron _____ ground state to be excited to a higher energy level. A spectrophotometer is an instrument used to determine at what wavelengths the sample absorbs light and the intensity of the absorption.

Task 4: An experiment: Preposition

Insert the correct preposition: with, in, under, until, over, at, for, on, by, through

A 1-L, three-necked, round-bottomed flask equipped _____ a pressure-equalizing dropping funnel, a thermometer, a magnetic stirring bar, and serum caps, is charged _____ 50 g (0.12 mol) of methyltriphenylphosphonium iodide and 320 mL of tetrahydrofuran and is flushed _____ argon. The flask is cooled _____ an ice bath and the suspension is stirred _____ a positive pressure of argon, while about 0.2–0.6 mL of 2.05 M phenyllithium in 30 : 70 ether: cyclohexane is added dropwise until the suspension develops a permanent yellow color. Then 56 mL (0.115 mol) of 2.05 M phenyllithium is added dropwise _____ 10 min. The ice bath is removed, and the orange suspension containing excess phosphonium salt is stirred _____ room temperature _____ 30 min. The reaction mixture is stirred and cooled _____ 0–5°C, and 17.2 g (0.11 mol) of geranial in 50 mL of

tetrahydrofuran is added dropwise ____ 10 min. The dropping funnel is rinsed ____ a small amount of tetrahydrofuran. The mixture is stirred ____ room temperature ____ 2 hr. The light-orange mixture is hydrolyzed ____ adding 2 mL of methanol, and most of the solvent is removed ____ a rotary evaporator ____ a slurry results. The slurry is diluted ____ 200 mL of petroleum ether (bp 60–68°C), and the supernatant solution is decanted and filtered ____ 150 g of Celite ____ a Büchner funnel. The solids remaining in the flask are heated ____ three 100-mL portions of hot petroleum ether, and the supernatant solutions are also filtered ____ Celite. The filtrate is concentrated ____ rotary evaporation to a yellowish liquid that is filtered ____ 150 g of Florisil on a Büchner funnel, and the Florisil is washed ____ 300 mL of petroleum ether. Rotary evaporation of the eluate provides approx. 15 g of clear liquid.

Task 5: Articles

Insert the article: **a, an, the, or Ø**

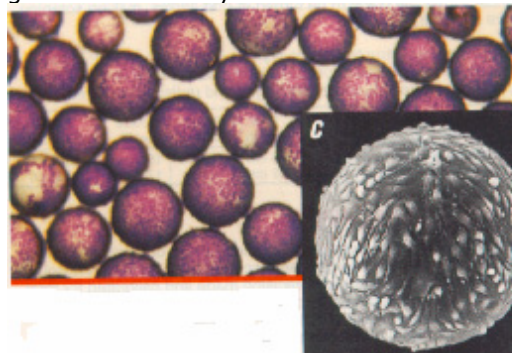
____ 2-L, three-necked, round-bottomed flask is dried in ____ oven and equipped with ____ mechanical stirrer, ____ thermometer, ____ Claisen adapter, and ____ two pressure-equalizing dropping funnels. ____ flask is charged with ____ 500 mL of dichloromethane and 20 mL (29.2 g, 0.23 mol) of oxalyl chloride. ____ solution is stirred and cooled at –50 to –60°C as 34 mL (37.5 g, 0.48 mol) of dimethyl sulfoxide in 100 mL of dichloromethane is added dropwise at ____ rapid rate. After 5 min 30.8 g (0.2 mol) of geraniol is added dropwise over 10 min maintaining ____ temperature at –50 to –60°C. After another 15 min, 140 mL of triethylamine is added dropwise while keeping ____ temperature at or below –50°C. ____ stirring is continued for 5 min, and ____ mixture is allowed to warm to room temperature and 700 mL of water is added. ____ aqueous layer is separated and extracted with two 300-mL portions of dichloromethane. ____ organic layers are combined, washed with two 100-mL portions of saturated sodium chloride, and dried over anhydrous magnesium sulfate. ____ filtered solution is concentrated to 500 mL by rotary evaporation and washed successively with 1% hydrochloric acid until it is no longer basic. ____ dichloromethane solution is washed with ____ water, 5% sodium carbonate, water, and saturated sodium chloride before drying over ____ anhydrous magnesium sulfate. ____ Rotary evaporation of the solvent gives ca. 30 g of crude product.

UNIT 7: Dealing with numbers and units

Microcarrier beads

Anchorage-dependent cell cultures are easy to grow with these microcarrier beads. Microscopic readings can be taken of these transparent beads. They are shape-stable, so dried cells will not be distorted. The surface area is 255 sq cm/gram of microcarrier, which provides a large culture area per litre of media. Microcarrier bead density is 1.05 g/cc; only minimal agitation is required to suspend the beads. Particle diameter varies from 160 to 300 μm . Powder weight of beads is 0.63 g/cc.

Microcarrier beads shown below with cell growth after 3 days



Note how the numbers and units have been written in the text. Would you write them down in the same way in Slovene?

0.63 g/cc

1.05 g/cc

Note how numbers are written and read in English:

1,350 one thousand three hundred and fifty
45.73 forty-five point seven three
3.05 three point oh five
26% twenty-six percent

! Decimals are indicated by a .(point) and not by a , (comma).

Reading mathematical symbols and fractions:

1 / 2 a half 2/3 two thirds
1 / 3 a third 5/8 five eighths
1 / 4 a quarter 3 / 4
three quarters
3 + 8 = 11 three plus eight equals eleven
16-5 sixteen minus five
8 x 2 eight times two
6÷2 six divided by two
50 kg/sq cm = 50 kilograms per square centimetre
70 kph 70 kilometres per hour
2:3 two to three
A<B A is smaller (less) than B
A>B A is greater (more) than B

Task 1: Say the following in words:

a) $88 \div 7$ b) $156 - 5$ c) $2,547 + 18$ d) $P > A$ e) $C < B$ f) 74×17

g) $9/4$ h) 73% i) 23,650 j) 1,200,000 k) 1,000,000,000

Which technical concepts do the following units refer to?

<u>Unit</u>	<i>Refers to:</i>
sq cm	surface area
ml	?
g	?
μm	?

Task 2: Read the data from the right column in the table:**Breathing apparatus for long-term operations in toxic environments**

Technical data	
operating time	4 h according to EN and NIOSH
Weight, ready to use	12.0 kg
Weight, including 0.9 kg of ice	12.9 kg
Dimensions	595 x 450 x 145 mm
Oxygen constant dosage	1.5L/min
Bypass dosage	> 80 L/min
Oxygen cylinder	2 L/200 bar/400 L
CO ₂ absorber	Disposable cartridge with soda lime or rechargeable cartridge
Breathing bag volume	5.5 L
Manual bypass dosage	> 80 L/min
Operating temperature	-15 to + 60°C

Note the following pairs:

Weigh - weight
Long - length
Wide - width
Deep - depth

Task 3: How would you say this?

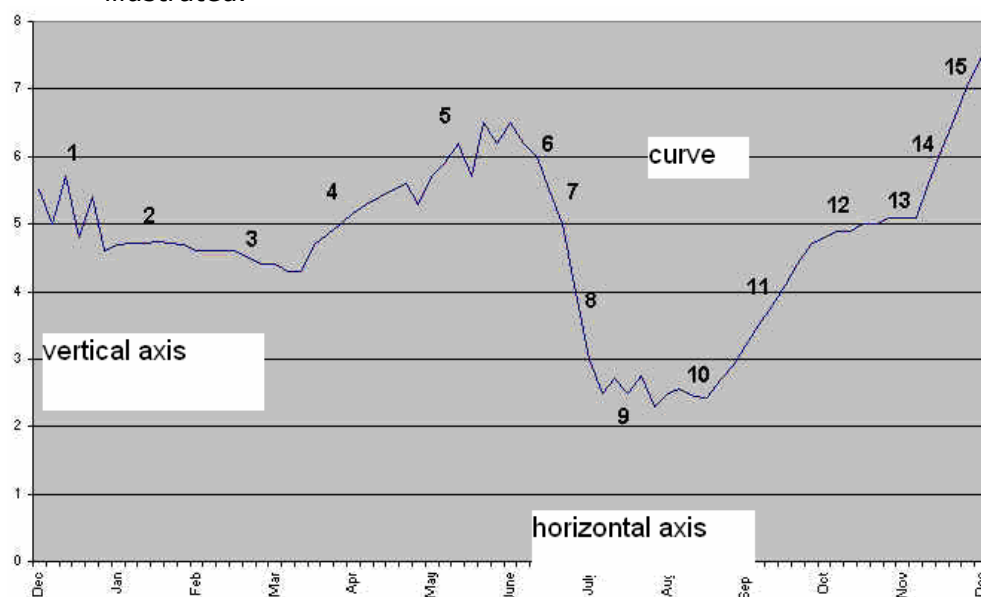
1. The bridge is 25 m _____, or it is 25 m in _____.
2. It _____ 30 tons, or the _____ of the bridge is 30 tons.
3. At this point the river is 4 m _____, or the _____ of the river is 4 m.
4. The river is 20 m _____, or the _____ of the river is 20 m.
- 5.

Describing a line graph

Line graphs are made of three important parts: the vertical axis, the horizontal axis and the diagonal line (curve) which shows the relationship between the figures on the vertical axis and those on the horizontal.

In describing the line graph you should:

1. determine the topic of the graph and
2. look at the axes and diagonal line to understand the relationship that is being illustrated.



() trough

() erratic movements

() a gradual rise

() to level off

() a dramatic fall

() fluctuations

() to reach a peak

() a gradual fall

() a plateau

() a steady increase

() to leap upwards

() a decline

() a sharp recovery

Using adjectives you can describe the degree of change. Do you know the corresponding adverbs ?

A dramatic fall	to fall
An abrupt rise	to rise
A sudden decline	to decline
A moderate grow	to grow
A slight increase	to increase
A rapid drop	to drop
A gradual decline	to decline
A steady recover	to recover
Erratic sales	to sell
A constant levelling off	to level off

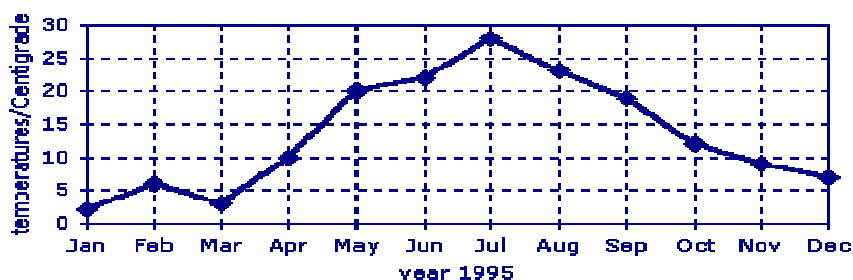
Other useful adjectives for describing changes:

slow, marked, sharp, substantial, significant, considerable

Task 1: How to describe a line graph

Look at the line graph and the text below and complete it with suitable forms of the verbs below.

be, continue, fall, finish, reach, rise, stand



Let us look at the average temperatures in our country in 1995. The horizontal axis stands for months and the vertical axis for temperatures in degrees Centigrade. Overall, the average temperatures higher than the year before. In January the temperature at 3°C, to almost 6°C in February, before back to 3°C in March. However, in April the temperatures subsequently and were well over the average temperature of 10°C. In May we can observe a steady rise in temperature until July when the temperatures a peak. After August there a sudden decrease in temperature which was largely due to the general weather pattern in other parts of Europe at that time. The fall in temperatures down to 12°C in October, at 6°C in December.

Task 2: Note the use of prepositions:

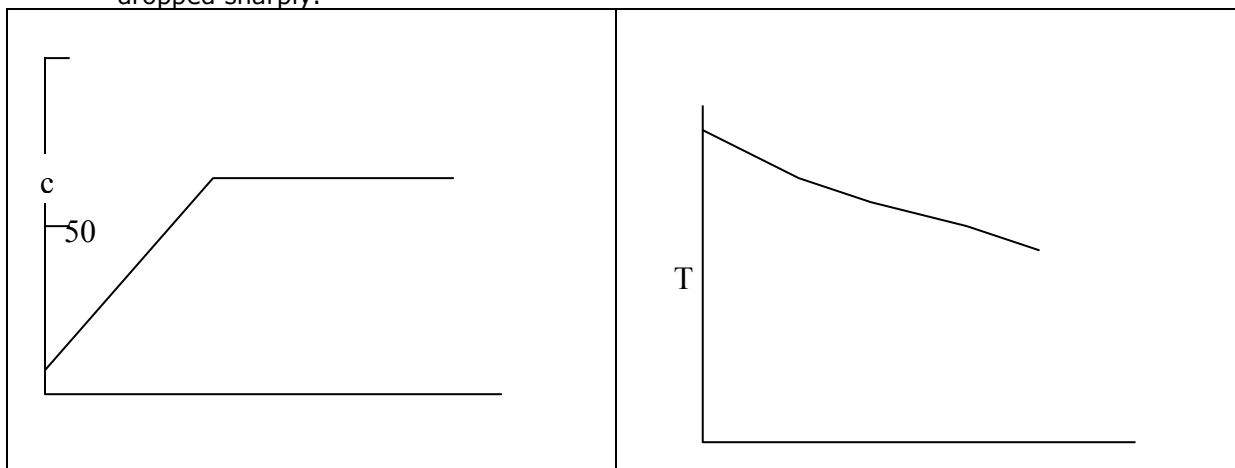
The temperature rose **by** 4°C.
There was a rise **of** 4°C.

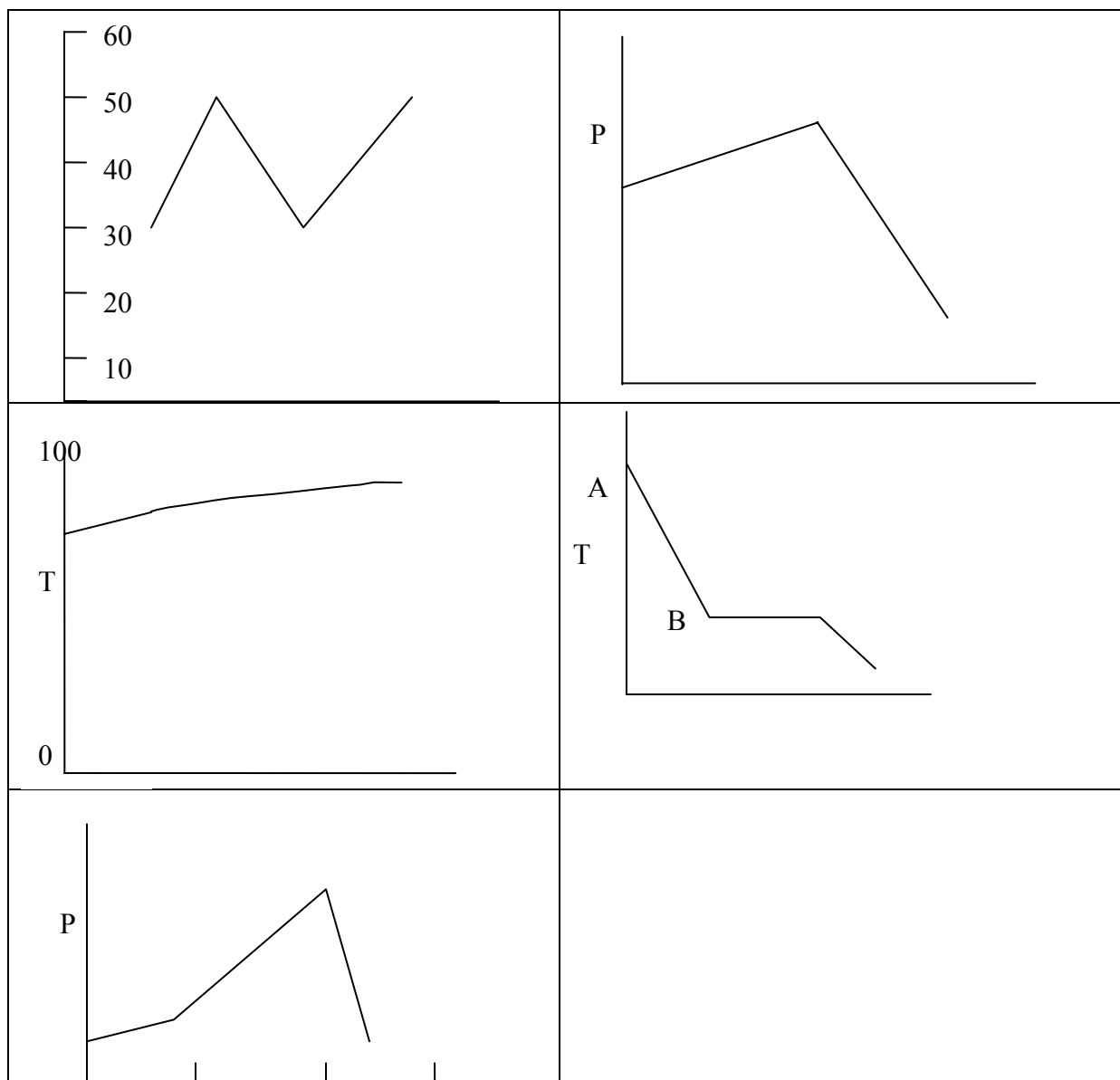
What is the difference? Complete the exercise below:

1. In 2006 the value of Euro stood (...) 240 SIT.
2. The Euro value rose (...) 3% in 1998.
3. The Euro value rose (...) 199 SIT in 1994 (...) 202 SIT in 1998.
4. There was an increase (...) 3 SIT (...) 1994 and 1998.

Task 3: Look at the sentences below which describe the movements of the curve in the line graphs and match them with the appropriate picture on the following page.

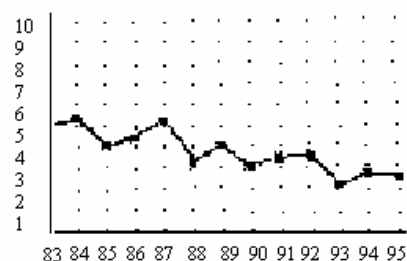
1. The pressure rose more and more rapidly over the first two hours and then reached a peak. After three hours it sharply dropped.
2. The temperature of the water fell steadily to point B at which it flattened off (became constant). After that it dropped again.
3. The temperature dropped slowly but steadily with time.
4. The concentration rose rapidly during the first two minutes and reached a plateau of about 60 gr/L.
5. The temperature fluctuated with time around an average value of 40 degrees C.
6. The rise of the pressure showed marginal rise during the first three minutes but then dropped sharply.
7. The rise of the pressure showed marginal rise during the first three minutes but then dropped sharply.





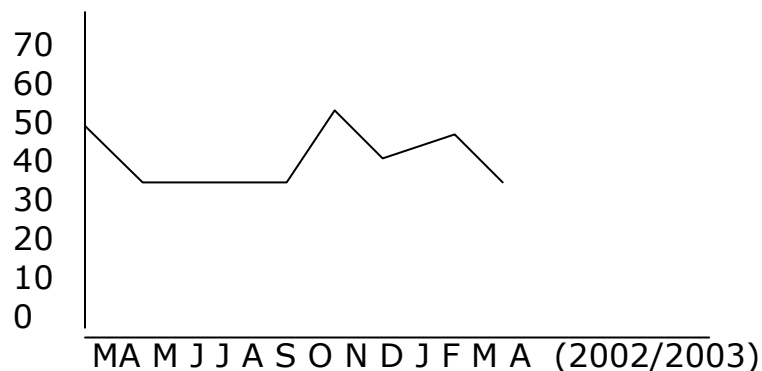
Task 4: Describe the line graph showing Laboratory Accident Frequency Rate 1983-95

The _____ graph represents _____ .
 The horizontal _____ stands for _____ and the _____ axis for _____ .
 During the period from 83-84, there was a _____ in the number of accidents which reached the peak in _____. After this period we can observe a _____. However, in the period from 85 to 87 there was again a _____ in the number of accidents. Fortunately, in the following period we can again observe a _____. After 1990 there was again a _____ in the number of accidents and after 1992 a _____ drop.



Task 5: Sales of Frosty Fish in 2002

As can be seen on this graph, the sales of Frosted Fish _____ from the start of financial year 2002. They started with a _____ in sales and _____ in September. Sales then _____ to a peak in November. During December sales _____ again, which can be attributed to the Christmas season and a general preference among the population for other food than fish. However, sales _____ during January but then _____ until the end of the financial year.



Unit 8: *DESCRIBING A PROCESS*

The art of process description can be divided into a number of language functions:

1. Logical sequence of actions
2. Impersonality (use of passive as well as the active)
3. Reason (Why)
4. Purpose (What for)
5. Method (How)

Connectives and useful expressions:

1. Sequence of actions

Before First/Firstly, The first stage is The first step is Beforehand, Previously,	until as during while when	Then, Next, Secondly,	After/later, Finally/In the end, Eventually, In the last stage, The last step is
---	---	--	---

Present tense (passive form) is the most frequent tense. Notice also the use of Present perfect forms:

e.g.

After/when the fibres have been separated, they are

After being centrifuged, the sample is subjected to further processing.

During the staining process

While the sample is stained.....

While being stained, the sample is....

Before the sample is stained....

Before being stained, the tissue is.....

2. Reason –Why?

Because Since	due to the fact that as	because of on account of due to owing to
--------------------------------	--	---

Certain animals hibernate because of the extreme cold in winter.

Metals expand when heated on account of increased molecular activity.

Leaves may become brown due to the improper storage.

Three crops are possible owing to the hot climate.

Rainfall is higher as clouds are forced to rise and cannot hold so much water vapour.

This figure certainly seems consistent with recent political decisions as they affect the progress of British science.

Leaves become brown in autumn due to the fact that waste products from the tree are stored in them. Many fruits become brightly coloured when ripe since this assists in seed dispersal.

3. Purpose – What for?

for + ing form of the verb so that in order to so as to
--

The temperature is decreased in order to allow settling.

The temperature is decreased so that the substance can slowly start cooling.

The temperature is decreased in order to allow the substance start cooling.

4. Method – How?

for + ing form of the verb by + noun/noun phrase with + noun using + noun with the help of	e.g. <u>by mixing</u> the substance.... <u>by</u> filtration/<u>by</u> magnetic separation.. <u>with</u> a stirrer.. <u>using</u> a stirrer..
---	--

Task 1: Use the information below to describe how blood is taken:

- Preparing the vials, needles and tampons
- Choosing a proper vein.
- Disinfecting the puncture.
- Applying the esmarch on the arm.
- Piercing the needle in the vein.
- Pushing the vial forward to collect blood
- Releasing the esmarch and filling the vial with blood
- Pressing the tampon on the piercing point.
- Discarding the used materials into a container
- Putting the sample on ice.

Task 2: Describing a laboratory procedure

Look at the steps which are used in histology for preparing the specimen for microscopic examination and write the whole procedure:

I. Biopsy – removing the tissue for histological diagnosis

II Tissue preparation:

1. Fixation
2. Dehydration
3. Clearing with solvents (e.g. xylene)
4. Infiltration with paraffin and embedding in paraffin
5. Paraffin block obtained

III. Treatment of an unstained histological slide

- Sectioning by microtome

IV. Preparation of histological slide for staining

1. Deparaffinization with organic solvents
2. Hydration by alcohols with decreasing concentration, finally in water

V. Staining procedure

- Applying a suitable staining method

VI. Preparation of the slide for microscopic examination

1. Dehydration with alcohols
2. Clearing with organic solvents
3. Mounting with a mounting medium (e.g. resins)
4. Covering with a coverslip glass to preserve the stained section

VII. Microscopic observation

UNIT 9: Speaking of illness

Fill in the prepositions

in for by out to off from under at

1. his life is hanging ____ a thread
2. he is fighting ____ his life
3. he is ____ a coma
4. she is not responding ____ treatment
5. he has come ____ of the coma
6. she is a bit ____ colour
7. he is still ____ the stress
8. she is suffering ____ pneumonia
9. he is allergic ____ dust
10. you are ____ perfect health
11. I am sickening ____ something
12. he is showing signs ____ coming round
13. he could go ____ any second



Infectious diseases

Task 1: Below are some common children and other infectious diseases and their descriptions. Find a corresponding Slovene term for each disease.

1. Whooping cough	The disease evolves over a period of 2 weeks. It usually starts as a sore throat with a mild feeling of tiredness and being unwell, that within 2 or 3 days turns into a (usually) dry, intermittent "ordinary" cough. This persists, but may wax and wane over the next 7 to 10 days by which time the cough may become a little productive of small amounts of sticky clear phlegm, and occasional intense bouts of choking coughing start to occur. Fever is usually limited to the first week and is only mild. There may be a runny nose like a cold in the early stages. After the first 2 weeks, the characteristics described below are predominant.
2. Chicken pox	is a highly contagious viral disease that is spread by direct contact or breathing in germs from someone's cough or sneeze. Two weeks after exposure, spots appear on the body. The following symptoms will occur 10-21 days after exposure to the virus: low grade fever, runny nose, slight cough, decrease in appetite, headache, tired, rundown feeling.

	<p>These symptoms usually occur 24-48 hours before the spots appear on the body.</p> <p>When the spots first appear they will start on the chest, back, or face, and eventually are seen over the entire body. The spots may occur in the mouth as white ulcers, and as ulcers in the ears and eyes.</p>
3. Measles	<p>is an acute, highly communicable viral disease with prodromal fever, conjunctivitis, cough, and Koplik spots on the buccal mucosa. A characteristic red blotchy rash appears around the third day of illness, beginning on the face and becoming generalized. Frequently complicated by middle ear infection or diarrhea. The disease can be severe, with bronchopneumonia or brain inflammation leading to death in about 2 of every 1,000 cases.</p>
4. Mumps	<p>is an acute viral disease characterized by fever, swelling and tenderness of one or more of the salivary glands.</p> <p>Although older people may contract the disease, it usually occurs in children between the ages of five and 15. The disease occurs less regularly than other common childhood communicable diseases. The greatest risk of infection occurs among older children. It is more common during winter and spring.</p> <p>It is transmitted by direct contact with saliva and discharges from the nose and throat of infected individuals.</p> <p>Symptoms: fever, swelling and tenderness of one or more of the salivary glands, usually the parotid gland (located just below the front of the ear). Approximately one-third of infected people do not exhibit symptoms.</p>

5. Small pox	<p>...is a disease caused by the Orthopoxvirus, Variola virus. It is infectious only for humans; there is no known animal reservoir or insect vector. Historically, 1 out of 3 people who contracted the disease died.</p> <p>Currently the virus has been eliminated from the human population, although some virus remains for laboratory use.</p>
6. Polio (myelitis)	<p>Poliomyelitis (polio) is a highly infectious disease caused by a virus. It invades the nervous system, and can cause total paralysis in a matter of hours. The virus enters the body through the mouth and multiplies in the intestine. Initial symptoms are fever, fatigue, headache, vomiting, stiffness in the neck and pain in the limbs. One in 200 infections leads to irreversible paralysis (usually in the legs). Amongst those paralysed, 5%-10% die when their breathing muscles become immobilised.</p>
7. Diphtheria	<p>is an acute bacterial disease that usually affects the tonsils, throat, nose and/or skin. It is passed from person to person by droplet transmission, usually by breathing in diphtheria bacteria after an infected person has coughed, sneezed or even laughed. It can also be spread by handling used tissues or by drinking from a glass used by an infected person.</p> <p>Diphtheria can lead to breathing problems, heart failure, paralysis and sometimes death.</p> <p>Symptoms: In its early stages, diphtheria may be mistaken for a severe sore throat. Other symptoms include a low-grade fever and enlarged lymph nodes (swollen glands) located in the neck. Another presentation of diphtheria can be skin lesions that may be painful, red and swollen. Symptoms usually appear 2 to 4 days after infection, with a range of 1 to 6 days. People carrying diphtheria germs are contagious for up to 4 weeks even if they themselves do not develop symptoms.</p>
8. Plague	<p>Plague is an infectious disease of animals and humans caused by a bacterium named <i>Yersinia pestis</i>.</p> <p>People usually get plague from being bitten by a rodent, or flea that is carrying the plague bacterium or by handling an infected animal.</p> <p>Millions of people in Europe died from plague in the Middle Ages, when human homes and places of work were inhabited by flea-infested rats. Today, modern antibiotics are effective against plague, but if an infected person is not treated promptly, the disease is likely to cause illness or death.</p>

Task 2: Word study: Refer to the text above and find words with the same meaning as:

1	fatigue	
1	become stronger and weaker	
1	a thick mucus	
1	a brief period of illness	
2	small organisms	
3	transmittable	
3	spots on skin	
4	catch a disease	
4	watery liquid in your mouth	
4	an organ of the body which secretes	
7	small organs at the back of the throat	
8	a small mammal with large sharp front teeth	

Task 3: Use the words from the box above and complete the exercise below:

1. She had a _____ of flu over Christmas.
2. Increasing numbers of people in high-powered jobs are suffering from _____ and stress-related illnesses.
3. It's in the nature of love that it _____ and _____.
4. I'm coughing up a lot of _____.
5. _____ can be spread by rats.
6. He _____ an awful stomach complaint while he was travelling.
7. In this period, there were 974 outbreaks of _____ disease attributed to the consumption of raw milk.
8. He came up in a _____ after he fell in a patch of nettles.
9. The salivary glands in your mouth produce _____.
10. Mice, rats, squirrels and rabbits are all _____.
11. The _____ in my neck are swollen - I must have got some sort of infection.
12. He had bad infection as a child, and had to have his _____ out.

Task 4: Word study - technical vocabulary

Translate into English:

1. mikroorganizmi
2. biti okužen z
3. razviti odpornost
4. izbruh (bolezni)
5. razviti simptome
6. cepivo

Life and Death Idioms

Task 5: Insert the word "life" or "death" to get an idiom:

- a) for the _____ of me.
- b) frighten the _____ out of me
- c) sick to _____
- d) bored to _____ .
- e) at _____ door
- f) dice with _____
- g) like _____ warmed up.

Task 6: Use these idioms in sentences:

1. All Mark talked about the whole evening was football. I was
2. Are you ill? You look
3. Please, be quiet. I'm of your constant complaining
4. Who's there? Is someone there? Oh, it's you, Joe. You I thought you were a burglar.
5. I can't remember his name for
6. I'm pleased your mother's out of hospital. That's good news. Yes, considering she was at last month, she's made a remarkable recovery.
7. You should get your brakes fixed. You're every time you go out on the road.



Unit 10: Professional Skills

Letters of Complaint



Complaints may arise from poor quality of the product or service, defective product or company error. In letters of complaint you need to express your disappointment but do not get insulting. You should not sound angry or threatening, in your letter. Remember, the person reading your letter may not be directly responsible for your problem, and can possibly help resolve it.

Stages in writing a letter of complaint

Paragraph 1: Describe the problem/situation

Tell what has happened and what you have done so far

Include product brand and model number, if necessary

Give as much detail as possible about the problem/situation

Useful language: Stating the purpose of writing:

I am writing you concerning the purchase ...

My complaint concerns

The purpose of this letter is to inform you of my problem with ...

I purchased the ...

On September 20, I ordered (by phone) a pair ...

Paragraph 2: Explain the situation. Tell the company what you want to be done and by when

Useful language: Explaining the situation

As you may recall we ordered a....

As you may be aware we placed a large order with you.

Possibly you may know that ...

I would in particular like to...

I should like to stress in particular...

In addition to....

Apart from that Furthermore I should also like to draw your attention to...

Paragraph 3 State your vow. Tell them what you will do if they do not meet your demands

Useful language:

To solve my problem, I would like ...

I would like the original amount of SIT 30.000 to be refunded.

I would appreciate your inquiry into this matter, and I expect the prompt delivery of to the address listed above.

Based on considerable years of mutual co-operation I trust that

With regard to the above...

Considering all this.... could you rectify/send another/issue a new...

Paragraph 3: Conclude the letter

Useful language:

Thank you for understanding...
Thank you for your consideration.
Thank you for your attention to this matter.
Your prompt attention and response would be greatly appreciated
I look forward to your reply and a resolution of my complaint.
Please do not hesitate to contact me if you need any clarification on the above matter.

Example 1: Analyse the letter and see if it contains all elements of a letter of complaint.

Which tenses have been used and why?

Dear Sirs,
On April 1 2000 I received a book entitled, "How To Write A Complaint Letter" by the author XXX. I believe I was shipped this book in error as I had ordered the book "How To Write A Love Letter" by the author YYY on March 15 2000 and to date I have not received the book. I am returning this book and including my postage receipt. Please credit my account the amount of the postage and send me the book I had originally ordered entitled "How To Write A Love Letter" by YYY, product-number 011011.

Yours sincerely,

Your Name

Task 1: Complete the letter with prepositions:

Customer Relations/Claims Company
John Duke Manufacturing Company
1104 Sutton Drive Suite #112
Cairo, MI 45006

Dear Representative:

I am writing _____ regards to a Digital Multimeter (DMM) that I recently purchased _____ mail-order from your company. Because the DMM only functions partially, I am requesting repairs, another DMM with comparable features, or a refund equal to the purchase price + C.O.D. charges, and shipping and handling.

I purchased the meter for \$250.00 _____ calling the 1-800 number listed in an advertisement. My phone order occurred _____ August 20th. The meter was delivered two weeks later. The total purchase price was \$282.50. The following items were included with the DMM: one set of meter leads, one power supply cord, and one black nylon-fiber carrying case.

The DMM (Duke Model 8012A) will not register an accurate voltage or current reading. When I received the DMM, I inspected the packaging in which the meter was shipped, and there was no evidence of damage. Styrofoam inserts were used to protect the meter from any shock during the shipping process.

Your prompt attention and response would be greatly appreciated as I intend to use the meter _____ conjunction with my job.

Sincerely,
Terry Ward

Task 2: Write two letters of complaint with the following content:

Situation A

You purchased a stereo system complete with amplifier, speakers, tape deck, and CD player (Sony #79432). You spent 400 EUR on your new system. You owned your system for 3 months when the CD player quit working. You called Big Bang, where you purchased the system, and they did not return your call. You visited the store and the person who sold you the system no longer worked there. He told you the store is not responsible for items sold by previous employees. The product warranty guarantees the stereo system to be free from defects for one year.

Write a letter to the manager of Bib Bang to complain about your CD player.

Situation B

You had your computer repaired at Anni Computers because the modem was not working. Within one week after bringing your computer home, the same problem with the modem occurs again. You have a Laptop computer, Model #358. You paid 120 EUR to have your modem repaired. Write a letter to Anni Computers to complain about the quality of their service.

Telephoning



Step 1: Say who is speaking

**Mark the phrase by a corresponding character:
a caller (C), a secretary (S), a receiver (R)**

1. I'd like to speak to someone about...
2. Could I have the name of the company, please?
3. Hello, is that accounts?
4. My name is Peter Adams. I'm calling about the bill.
5. The line's busy. Please, hold on.
6. I'll put you through.
7. I'll pass this information on.
8. I'll get him to do that.
9. Can he ring you back?
10. May I have your name, please?
11. Thank you for your call.
12. How are things?
13. I'm afraid this is a bad line.
14. Hello, this is Rafael. I'm returning your call.
15. Twelve o'clock suits me. Look forward to seeing you then.
16. It's Mr. Sanchez.
17. Speaking.
18. Is this Mrs. King?
19. There's no reply.
20. She's on a visit to a supplier.
21. Glaxo. Can I help you?
22. She's on another line.
23. Yes, I'll hold on.
24. He's not in the office at the moment.
25. He'll be out all day.
26. I can't reach him.
27. The line is engaged. Will you hold?
28. The number is ringing for you now.
29. Could you spell that for me, please?
30. If it's interesting, give me a ring.
31. This is Robert Webster speaking. I'm not in the office at the moment but I expect to be back shortly. Please leave your name, number and a message when you hear the signal. Thank you for your call.

Step 2.

Study the following phrases which are used in telephoning:



Operator/secretary

Answer the phone (Prevzemite)	(ime podjetja) Good morning. Can I help you?
Asking to repeat (Preverite ime sogovornika).	Sorry, could you repeat that? What was your name again? Could I have your name again?
Asking to spell words (prosite, da črkuje)	Could you spell your name? Could I read that back to you?
Connecting (Vežem)	One moment. I'll connect you. I'll put you through. Hold the line, please.
The person is not there (Oseba ni dosegljiva).	Sorry, he/she is not in at the moment. I'm afraid she's at lunch right now. I'm afraid there is no reply (he is out of the office)
Line is busy (Linija je zasedena.).	I'm sorry, the line's busy. Will you hold? The extension is engaged. Would you care to hold?
Line is free again (Linija je zopet prosta).	I can put you through now Putting you through. Go ahead. You're connected.
Leaving a message (Vprašajte, če želi pustiti sporočilo).	Would you care to leave a message? Can I give him a message? Will you leave a message? What message shall I give to Mr./Mrs... I'll pass this information on. I'll get him to do that.
Calling again (Recite, naj spet pokliče).	He should be free later. She will be free in an hour. He won't be available until 5 p.m.
Checking the number (Preverite številko)	What number are you on? What's your number? What's the code?
End of a phone call (Pozdrav in zahvala)	My pleasure. Thank you for calling.

Caller



Ask to speak to Mr. XY. (Zahtevajte sogovornika).	Could I speak to Mr. XY, please? Is Mr. XY there, please? Is Mr. XY in?
Ask for the extension number (Zahtevajte interno številko).	Could I have extension 401, please? Extension 401, please. Could you give me extension 401, please?
Ask when the person will be back again (Vprašajte, kdaj bo dosegljiv).	When do you expect him to be back? Do you know when she will be back in the office? What time will he be back?
Leaving a message (Pustite sporočilo)	Could you take a message? Can (could) you ask him/her to...
Checking the person has understood (Shall I repeat that? Have you got that?
Calling back later (Recite, da boste klicali kasneje).	Can I call you back in an hour?. I'll call later. I'll call again around six o'clock.
Giving your telephone number: ++386-61-113-23-26	<u>country code</u> is three, eight, six <u>area code</u> is six, one <u>telephone number</u> is double one, three two three, two, six
Saying good bye	Thank you very much. Good bye.



Receiver

Odgovorite na telefon (Answering the phone):	Yes, speaking.
Dogovor glede sestanka (Making arrangements)	When would be convenient for you? How about Monday morning? What about Tuesday afternoon?
Poslovite se.	Please, call me back . I'll call back later. Thanks for calling.

Step 3:**Which phrase would you use to:**

1. Ask someone to wait?
2. To say someone is busy?
3. When you don't hear something?
4. To check someone has written the message correctly?
5. To reply to *Thank you*?
6. When you connect a caller?
7. At the end of a phone call?

Step 4:**How would you complete the following conversations?****Conversation 1**

A Could I speak to Mr. Brown, please?
B
A Oh, dear.?
Bmess age?
A Yes

Conversation 2

A: Could I speak to Mr. Brown please?
B
A: It's Bojan Kovač
B
A: Yes, B O J A N K O V A Č
B:

Conversation 3

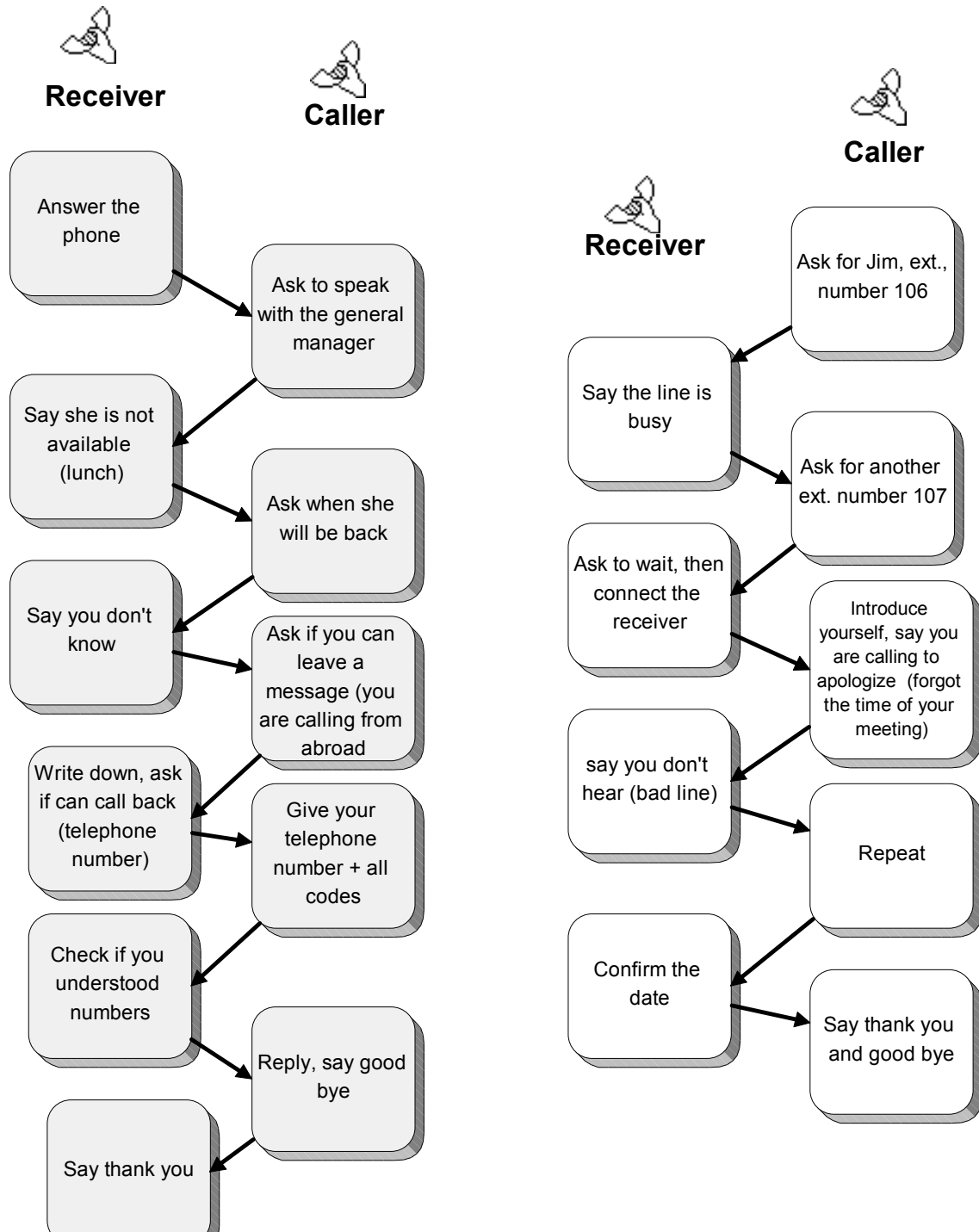
A What's the address?
B I'll spell it for you:
A Could I read that back to you? Peričeva 72.
B
A I'm looking forward to seeing you, too.

Conversation 4

A: Bill Ross, please.
B
A: I'm calling to ask you if I could meet you to discuss....
B When
A: Would Monday 10,00 a.m. suit you?
B: Fine.

Step 5: Role play

Work with your partner. Act out a telephone conversation, using the flowchart below:



Unit 11: Texts for translation

UREASE TEST

Urease is an enzyme that breaks the carbon-nitrogen bond of amides to form carbon dioxide, ammonia, and water. Members of genus *Proteus* are known to produce urease. Urease can be detected by plating bacteria onto an amide containing medium, specifically urea. When urea is broken down, ammonia is released and the pH of the medium increases (becomes more basic). This pH change is detected by a pH indicator that turns pink in a basic environment. A pink medium indicates a positive test for urease.

OXIDASE TEST

Cytochrome oxidase is an enzyme found in some bacteria that transfers electrons to oxygen, the final electron acceptor in some electron transport chains. Thus, the enzyme oxidizes reduced cytochrome c to make this transfer of energy. Presence of cytochrome oxidase can be detected through the use of an Oxidase Disk which acts as an electron donor to cytochrome oxidase. If the bacteria oxidize the disk (remove electrons) the disk will turn purple, indicating a positive test. No color change indicates a negative test.

BILE ESCULIN AGAR

Bile esculin agar is a medium used to identify group D streptococci. This group of bacteria have the ability to grow in the presence of bile, an emulsifying agent produced in the liver. Group D streptococci also have the ability to hydrolyze esculin. This hydrolysis of esculin turns the medium black and denotes a positive test. Other bacteria capable of growing in the presence of bile do not turn the medium black. A variation of this medium uses sodium azide to inhibit the growth of all other Gram-positive bacteria and Gram-negative bacteria.

LISTERIA

Listeria is a Gram-positive rod which is not capable of forming endospores. Although several species of this bacterium exist, our discussion will focus only on the two species of human pathogenic significance: *L. monocytogenes* and *L. ivanovii*. In particular, *L. monocytogenes* has been implicated in several food poisoning epidemics. This normal inhabitant of the gastrointestinal tract and of animal faeces led to a 1986 outbreak in Massachusetts hospital patients. Those infected suffered from vomiting, nausea, and diarrhea. Apparently, the hospital patients contracted the microbe from the infected hospital food and were at high risk of infection. Those at high risk include newborns, pregnant women and their fetuses, the elderly, and persons lacking a healthy immune system. The bacterium usually causes septicemia and meningitis in patients with suppressed immune function. It also causes listeriosis which is an inflammation of the brain. Antibiotics are recommended for treatment of infection because most strains of *Listeria* are sensitive to ampicillin and gentamicin.